

REMARKS

Applicant respectfully traverses and requests reconsideration.

Claim Amendments

Claims 1, 3-4, 6-11, 18, 20-22 have been amended. Claims 2, 12 and 23 have been cancelled without prejudice. Claim 26 has been added. No new matter has been added.

Claim Rejections

Claims 1-6, 11-12 and 18-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,195,467, Chan (“Chan”) in view of U.S. Publication No. 2003/0156301, Kempf (“Kempf”) in further view of U.S. Patent No. 7,031,551, Yano (“Yano”). Claims 7-10 and 13-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan in view of Kempf and Yano as applied to claims 1-2 above, and further in view of U.S. Patent No. 6,195,467, Asimopoulos (“Asimopoulos”).

Claim 1, as amended and among other things, requires the incrementing of a count value when the compare pixel value is below a threshold value and generating an output center pixel value wherein: “(d)(1) if the count value has been incremented [], the output center pixel value is based on the count value and the accumulation value without using the center pixel value, and (d)(2) if the count value has not been incremented [], the output center pixel value is equivalent to the center pixel value.

The current Office action alleges that these limitations are met by the combination of Chan and Yano, specifically, Chan: column 5, lines 1-20 and Yano: column 2, lines 28-36 and column 3, lines 15-25. (Office action, pp. 3-4). Applicant, however, respectfully disagrees and notes that assuming that Chan and Yano may be combined, a position refuted by Applicant below, the combination of Chan and Yano appears to only teach: taking the difference in pixel values between a given pixel of interest and other pixels (for purposes herein, this result is

referred to as the “delta pixel value”) and always using the pixel value of the given pixel of interest in generating a new pixel value for the same pixel location. In contrast, Applicant’s claim 1 only uses the center pixel value if the count value has not been incremented. For this reason, Claim 1 appears to be in proper condition for allowance.

For example, Chan appears to teach, for each pixel surrounding a given pixel of interest, summing the given pixel value with the delta pixel value. Delta pixel values that are not above a threshold value are excluded from this summation. Chan then takes the average of these results by adding each of the resulting summations and dividing by the number of surrounding pixels. (Chan: column 5, lines 1-20). This can be reduced to adding the give pixel value to the quotient of the sum of all delta pixel values that exceed the threshold value with the number of surrounding pixel values. Clearly, regardless of the delta pixel value, the given pixel value is always considered in the determination of the output pixel. As noted above, this is in contrast to the express language of claim 1.

Similarly, Yano appears to teach, for pixels near or surrounding a given pixel of interest, summing each delta pixel value that is below a threshold value, dividing this summation by the number of such delta pixel values below the threshold value, and adding this average to the given pixel value to generate a new pixel value for the same pixel location. Clearly, regardless of the delta pixel values, the given pixel value is always considered in the determination of the output pixel. As noted above, this is in contrast to the express language of claim 1.

Consequently, for this reason alone, claim 1 stands in proper condition for allowance.

Moreover, Applicant respectfully submit that Chan and Yano are not properly combinable because they directly contradict one another. First, as noted by the Office action, Chan compared delta pixel values to a threshold value and only uses the delta pixel values if they exceed a threshold value. (Office action, p. 3). Second, as skirted by the Office action, Yano

does not just determine if the delta pixel values “meet a thresholding criteria” as meeting a thresholding criteria, in the abstract, can refer to exceeding or exceeding a threshold value. This is not what Yano states. Instead, Yano expressly teaches comparing delta pixel values to a threshold value and summing them only when these delta pixel values are less than a threshold value. (Yano: Fig. 19, selection means 105 and Col. 2, ll. 1-19). Consequently, Applicant submits that the publications teach away from one another and are not properly combinable.

Further, Chan takes an average of the number of delta pixel values that exceed a threshold value, where the denominator is set to the number of surrounding pixel values. (Chan: column 5, lines 1-20). In contrast, Yano takes an average of the number of delta pixel values that are less than a threshold value, where the denominator is set to the number of delta pixel values that are less than the threshold value. (Yano: Fig. 19, elements 104 and 107; Col. 2, ll. 1-19). Because the denominators are different, the publications provide for a different averaging or weighting scheme apparently useful for the intended purpose of sharpening (in the case of Chan) and reducing noise (in the context of Yano), the publications teach away from one another and are not properly combinable.

Applicant also notes that in addition to teaching away from one another, the publications are not properly combinable because each would no longer function in the manner intended. Applicant postulates that the threshold values and the testing of delta pixel values based on the given threshold values are chosen to sharpen an image in Chan and to reduce noise in Yano. Thus if the test were altered for either of Chan and Yano with respect to the delta pixel values exceeding or being less than a threshold value, at least one of Chan and Yano would no longer work for its intended purpose presumably because the question of whether a delta pixel value exceeds or is less than a threshold value is apparently only relevant to one of the publications but

not both. Because Applicants are unable to find any teaching or suggestion to the contrary, Chan and Yano are not properly combinable.

As to claim 4, which requires, among other things, “generating the output center pixel value as the accumulation value divided by the count value”, Applicant respectfully reasserts the relevant remarks made above with respect to claim 1. For instance, because in each of the cited publications, the given pixel value is always used to calculate a new pixel value, the instant claim, which equates the output center pixel value to the division of the accumulation value by the count value, cannot be taught or otherwise suggested by the cited publications. For this reason alone claim 4 appears to be allowable.

Claims 11, 18, 22 and new claim 26 each contain the same or similar limitations as claim 1 and/or claim 4 and are therefore allowable for at least the same reasons as claims 1 and 4. Claim 25 contains the same or similar limitations as claim 4 and is therefore allowable for at least the same reasons as its independent claim and claim 4.

Claims 3-10, 13-17, 19-21 and 34-35 depend upon allowable base claims and are believed to add additional novel, nonobvious and patentable subject matter. For at least these reasons, the aforementioned dependent claims are also believed to be in proper condition for allowance.

Accordingly, Applicant respectfully submits that the claims are in condition for allowance and that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

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